bio-protocol Preprint

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Rotarod (Ugo Basile Biological Research Apparatus)

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An abbreviated version of this protocol was published in eLIFE in Dec 2015

Ataxin-1 oligomers induce local spread of pathology and decreasing them by passive immunization slows Spinocerebellar ataxia type 1 phenotypes

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Detailed protocol

1. On day 1, mark the tails with black marker for quick identification. (one line for no ear tag, two for a right ear tag, *etc.*).
2. Check the speed/gears of the machine. For 4-40 RPM, use the largest gear on the bottom and the second smallest gear on the top (second in from right).
3. Have timer ready and machine not accelerating set to the lowest speed. The switch for the speed on the right-hand side of the front of the machine should be DOWN. Place mice in the machine.
4. Once all of the mice are in the machine, simultaneously start the time and acceleration (flip the switch in the front UP).
5. Record the time the mice fall off the rotating rod. Score also as a fall 2 consecutive events where the mouse doesn't walk on the rod but holds on and rotates where consecutive is not recovering to walk ~5 steps. Continue to let the mouse go until it finally falls off and record that time. Each trial lasted 10 min. The rod accelerates from 4 to 40 rpm over 5 min and the mice are score for their latency to fall (in seconds) for each trial.
6. Wipe down waste trays in between with 70% EtOH.
7. Test runs 4 trials for 4 consecutive days at the same time each day in room without outside distractions. There should be at least a 60-minute lapse between when the last mouse falls for one group and when that group is tested for the next trial.

How to cite:(Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Lasagna-Reeves, C. A.(2019). Rotarod (Ugo Basile Biological Research Apparatus). Bio-protocol Preprint. bio-protocol.org/prep14.
2. Lasagna-Reeves, C. A., Rousseaux, M. W., Guerrero-Munoz, M. J., Vilanova-Velez, L., Park, J., See, L., Jafar-Nejad, P., Richman, R., Orr, H. T., Kayed, R. and Zoghbi, H. Y.(2015). Ataxin-1 oligomers induce local spread of pathology and decreasing them by passive immunization slows Spinocerebellar ataxia type 1 phenotypes. eLIFE. DOI: 10.7554/eLife.10891